

CIA/OBGI /PN 64-2702/2/74

CONFIDENTIAL--OPINIONS ON THE RECORD OF THE FIRST

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MEETING OF THE US-USSR JOINT COMMITTEE ON COOPERATION
IN THE FIELD OF TRANSPORTATION

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PN 64.2702/2
12 March 1974

MEMORANDUM FOR: [REDACTED]

SUBJECT : Opinions on the Record of the First
Meeting of the US-USSR Joint
Committee on Cooperation in the
Field of Transportation

25X1A REFERENCE : [REDACTED] Opinion Request, dated 14 February 1974

1. The attached outline provides my assessment of (a) areas within the various fields of the transportation exchange where the US may gain useful information, (b) areas where the Soviets may stand to gain, and (c) topics which are of greatest interest to the US. In general, both the US and USSR can probably benefit from exchanges of information on transportation technology and systems if that information is widely disseminated within their respective industries.

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USSR-Europe Branch
Geography Division, OBGI

Attachment:
a/s

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§5B(1), (C), (U), or (S) (one or more)
Automatically declassified on
Date Impossible to Determine

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Attachment

I. Areas of Greatest Gain for the United States or for the USSR in the Proposed Exchange of Information

A. Field of Transportation Construction

1. US may gain useful information in:

- a. Production of pre-cast concrete structures for bridges, including tolerance control.
- b. Design and construction of bridge foundations for different geological conditions and severe climatic conditions (primarily permafrost and in arctic latitudes).
- c. Study of improved, as well as new, methods of rock disintegration and equipment used for this purpose.
- d. Study of improved special methods used in constructing transportation tunnels.

2. USSR may gain particularly in:

- a. Production of the steel structures for bridges, including the control of stress in the course of fabrication.
- b. Monitoring ground stresses and experimental determination of loads on tunnel lining in different kinds of ground.
- c. Automation of processes of bridge calculation and design by use of computers.

B. Field of Air Transportation

1. US may gain useful information in:

Use of aviation in agriculture, construction, and other commercial application.

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2. USSR may gain particularly in:

a. Air traffic control techniques, and US-manufactured control hardware and software.

b. Discussions in the area of non-visual approach landing systems.

c. Exchange of information pertaining to the training of specialists in Civil Aviation (e.g. flight crew personnel, accident investigators, etc).

C. Field of Automobile Transport

1. US may gain useful information in:

a. Methods and application of traffic regulation enforcement.

b. Programs and measures to improve the educational work and training of pedestrians and drivers.

2. USSR may gain particularly in:

a. Forms and methods of traffic regulation, including automated systems.

b. Technical and other means employed in traffic regulation (radar, patrols, helicopters, etc.).

c. Preventative measures connected with road-worthiness of vehicles, including methods of inspection for uncovering vehicular defects.

d. Highway engineering for traffic safety (contour, grade, signs, barriers etc.).

e. Organization and basic direction of highway safety research.

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D. Field of Rail Transport

1. US may gain useful information in:

a. Modern designs of railroad tracks, including continuous welded rails laid on concrete structures, as well as the system of mechanization maintenance and repair. More specifically the following topics:

(1) Lateral and vertical stiffness of conventional track.

(2) System response of rails supported on concrete slabs and beams (concrete plates).

(3) Behavior of track that includes continuously welded rail exposed to temperature ranges exceeding 70 degrees centigrade.

(4) Evaluation of stressed concrete sleeper design and usage methods.

(5) Determination of inside flaws in railroad rails.

(6) Design of modern railroad tracks, including usage of continuous welded rails.

(7) System and equipment for track maintenance and repair.

(8) Standard (tolerance) for track maintenance, useful life time of the various components of the track structure.

(9) Safety of the track repair crew.

(10) Systems and means providing railroad grade crossing protection.

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b. Modern electrified railroads, including design of electric motive power, catenary and power supply substations. Included are the following topics:

(1) Motive power conditioning and conversion, i.e., AC to AC and DC to DC systems.

(2) Catenary design and maintenance, particularly with respect to cold weather operation.

(3) Interaction of railroad operational control with electrification systems.

(4) Specific designation criteria for choosing lines to electrify.

2. USSR may gain particularly in:

a. Systems of transporting perishable food stuffs in self-contained refrigeration cars. Included are the following topics:

(1) Design of refrigerator cars.

(2) System of maintenance of refrigerator cars.

(3) Temperature checking in refrigerator cars enroute.

b. Information on high-speed railroad passenger traffic, rolling stock design and systems of automated control of railroad freight operations.

E. Field of Ocean Transportation

1. US may gain useful information in:

a. Ice-transiting vessel technical interchange, in both the ice-breaking and commercial ice-transiting areas.

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b. The following areas concerning ice-related problems:

- (1) Ice formation
- (2) Model testing
- (3) Ship design for ice navigation
- (4) Ship operation in ice
- (5) Icebreakers
- (6) Ports and terminals
- (7) Inland waterway hydraulic construction
- (8) Economic considerations

c. Organization and development of joint research and requirements for safety of life at sea.

d. Commercial ship equipment, crew training and human factors. Included are shipboard automation and means of communication.

e. Joint US-USSR Study of ocean wave spectra and loads in ship body elements at sea.

2. USSR may gain particularly in:

Organization and technology of ocean commerce and cargo handling in ocean ports.

II. Topics of Greatest Interest to US

(General fields listed in the order of Priority)

A. In the Field of Marine Transport

1. Exchange of information on ice-transiting vessels.

2. Commercial ship equipment, crew training, and human factors.

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3. Joint study of ocean wave spectra and of loads in ship body elements at sea.

B. In the field of Railroad Transport

1. Modern designs of railroad tracks, including continuous welded rails laid on concrete structures, as well as the system of mechanized maintenance and repair of tracks.

2. Modern electrified railroads, including design of electric motive power, catenary and power supply substations.

C. In the field of Transport Construction

1. Research connected with the production of the pre-cast concrete structures for bridges, including tolerance control.

2. Research connected with designing and construction of bridge foundations for different geological conditions and severe climate conditions (primarily in the arctic and in permafrost regions).

3. Improved special methods in the design and constructing of transportation tunnels.

4. Study of improved methods of rock disintegration and equipment used for tunnel construction.

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